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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/603,913

06/24/2003

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852.0029.U1(US)

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EXAMINER

CHANG, RICK KILTAE

ART UNIT

PAPER NUMBER

3726

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11/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/603,913	<b>Applicant(s)</b> HASHIZUME ET AL.	
	<b>Examiner</b> Rick K. Chang	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) 33 and 35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20,34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Species 1 in the reply filed on 8/12/08 is acknowledged. Due their different structures, the integral electrical connector structure is provided on the cover member and configured to removably receive at least a portion of a mating member and in Species 1; while in Species 2, the integral electrical connector structure is integrally formed with the cover member and incapable of removably receive at least a portion of a mating member and . Therefore, the species are independent or distinct because the species are not capable of use together and are not obvious variations of one another. Applicant's traverse of the requirement for election of species is noted, asserting that there is no serious burden on the examiner to examine all claims. The traverse has been carefully considered, but is not persuasive because the reasons proffered do not appear germane to the propriety of a requirement for election of species. The sections of the manual cited relate to restriction, not a requirement for election of species, which is clearly covered in section 808.01(a). Once the claims are determined to be directed to mutually patentable inventions and the Office requires an election of species, a persuasive traverse is an admission on the record that applicant does not find the claimed species are patentable, one over the other. Having not done so, the reasons presented are not persuasive. Applicant is not entitled to examination of multiple independent inventions in one application. Moreover, examination of the independent inventions herein would clearly present a burden because the searches will not be coextensive. Accordingly, the requirement is repeated and made final. Species 2 will be combined if applicant will stipulate that they are obvious over each other.

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The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-20 and 34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure, as originally filed, failed to provide support for “an integral electrical connector structure,” “providing on the cover member an integral electrical connector structure” and “the integral electrical connector structure is configured to removably receive at least a portion of a mating connecting member of the electronic component therein” in claim 1, lines 4-9.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are numerous phrases and clauses in the claims that are vague, indefinite, and/or awkwardly and confusingly worded, and therefore, are not fully understood. The following are examples:

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Claim 1, lines 7-9: the limitation “the integral electrical connector structure is configured to removably receive at least a portion of a mating connecting member of the electronic component therein” renders the claim vague and indefinite. It is unclear how an integral electrical connector structure is removable while this is an integral part of the cover member. Is a mating connecting member or an integral electrical connector structure removable?

Claims 2 and 5, lines 2-3: “the step of incorporating . . .” lacks positive antecedent basis.

Claim 5, lines 6-7: “forming a precursor for the electrical circuitry” renders the claim vague and indefinite. Is “the electrical circuitry” referring to “electrical circuitry” in claim 1, line 2 or something else?

Claims are ambiguous and competitors would be unable to discern the bounds of the invention.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Yuasa et al (US 6,603,283).

Re claim 1: Yuasa discloses providing electrical circuitry (10, 11), subsequently moulding an electronic device cover member (12b) for an electronic device on to the electrical circuitry, and providing on the cover member an integral electrical connector structure (10a, 11a)

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for connecting the electrical circuitry to an electronic component, wherein the integral electrical connector structure is configured to removably receive (5 are removable from 3) at least a portion of a mating connecting member (7, 8) of the electronic component therein.

Re claim 2: Yuasa discloses the step of incorporating the electrical circuitry into the cover member comprises forming an electrical circuitry element (Fig. 5C), arranging the electrical circuitry element in a mould (col. 6, lines 22-28) and moulding the cover member onto the electrical circuitry element (Fig. 5D).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-4, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuasa et al (US 6,603,283) in view of Sugiyama et al (US 4,781,600).

Yuasa discloses introducing a material into the mould after the electrical circuitry element is arranged in the mould (col. 6, lines 22-28), and forming the connector structure with the cover member in the mould (Fig. 5D), except a plastics material.

Sugiyama discloses a plastics material (col. 5, lines 32-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa by providing a plastics material, as taught by Sugiyama, for the purpose of providing a material that is well known in the art for its insulating ability.

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10. Claims 5-9, 12-13, 18, and 34, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuasa et al (US 6,603,283) in view of Sullivan et al (US 7,181,172).

Re claims 5, 7-9, 12-13: Yuasa discloses forming a first part of the cover member in a first moulding operation (Fig. 5D), except for forming a second part of the cover member in a second moulding operation, the second moulding operation comprising forming a precursor for the electrical circuitry, and thereafter applying an electroconductive, material to the precursor to form the electrical circuitry.

Sullivan discloses forming a second part of the cover member in a second moulding operation, the second moulding operation comprising forming a precursor for the electrical circuitry, and thereafter applying an electroconductive, material to the precursor to form the electrical circuitry (col. 4, lines 8-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa by forming a second part of the cover member in a second moulding operation, the second moulding operation comprising forming a precursor for the electrical circuitry, and thereafter applying an electroconductive, material to the precursor to form the electrical circuitry, as taught by Sullivan, for the purpose of reducing parts.

Re claims 6, 18: Yuasa discloses forming a first part of the cover member in a first moulding operation (Fig. 5D), except for the integral connector structure is formed on the second part during the second moulding operation.

Sullivan discloses forming a second part of the cover member in a second moulding operation (col. 4, lines 8-39); therefore, the integral connector structure is formed on the second part during the second moulding operation (the second molding of Sullivan is formed on the

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Yuasa's first part of the cover member to form the integral connector structure on the second part).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa by forming the integral connector structure on the second part during the second moulding operation, as taught by Sullivan, for the purpose of reducing parts.

Re claim 34: Yuasa teaches the invention as described with respect to claim 1, except for a mobile phone cover member.

Sullivan discloses a mobile phone cover member (col. 1, line 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa by manufacturing a mobile phone cover member, as taught by Sullivan, for the purpose of providing a communication device that increases reliability and improves overall performance.

11. Claim 10-11, 14-15, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuasa et al (US 6,603,283)/Sullivan et al (US 7,181,172) as applied to claims 1, 5, 9, 12-13 above, and further in view of Yusa et al (US 7,211,207).

Yuasa/Sullivan fail to disclose electroless plating and the plastic material carrying metallic particles.

Yusa discloses electroless plating and the plastic material carrying metallic particles (col. 9, lines 1-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa/Sullivan by electroless plating and the plastic material carrying



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metallic particles, as taught by Yusa, for the purpose of enhancing adhesion between a resin layer and a metal layer and forming fine conductors.

12. Claim 16, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Yuasa et al (US 6,603,283)/Sullivan et al (US 7,181,172)/Yusa et al (US 7,211,207) as applied to claims 1, 12-13 and 15 above, and further in view of Murakami et al (US 4,239,813).

Yuasa/Sullivan/Yusa fail to disclose that the carrier material comprises an ink and printing the carrier material on the substrate.

Murakami discloses the carrier material comprises an ink and printing the carrier material on the substrate (col. 1, lines 33-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa/Sullivan/Yusa by the carrier material comprises an ink and printing the carrier material on the substrate, as taught by Murakami, for the purpose of enhancing adhesion between a resin layer and a metal layer.

13. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yuasa et al (US 6,603,283)/Sullivan et al (US 7,181,172)/Yusa et al (US 7,211,207) as applied to claims 1, 12 above, and further in view of Nishihara et al (US 5,118,458).

Yuasa/Sullivan/Yusa fail to disclose press moulding the substrate, moulding the connector onto the cover member after the substrate has been moulded to form the cover member, providing a flexible holding member in the connector structure to hold the electronic component in electrical communication with the electrical circuitry and a resilient member for the flexible holding member.

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Nishihara discloses press moulding (Fig. 5 shows 2 pressing onto 1 with substrate therebetween), moulding the connector (Fig. 7 element 16) onto the cover member (Fig. 7 shows a second layer) after the substrate has been moulded to form the cover member, providing a flexible holding member in the connector structure to hold the electronic component in electrical communication with the electrical circuitry and a resilient member for the flexible holding member (Fig. 13 shows interconnecting the layers as a second molding, Fig. 15 shows mounting components, all the layers are flexible and resilient member, the layers can be any number depending on the design criteria).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yuasa/Sullivan/Yusa by press moulding the substrate, moulding the connector onto the cover member after the substrate has been moulded to form the cover member, providing a flexible holding member in the connector structure to hold the electronic component in electrical communication with the electrical circuitry and a resilient member for the flexible holding member, as taught by Nishihara, for the purpose of molding a multi-layer flexible circuit for mobile phones.

### ***Response to Arguments***

14. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Interviews After Final***

15. Applicant note that an interview after a final rejection must be submitted briefly in writing the intended purpose and content of the interview (the agenda of the interview must be in writing). Upon review of the agenda, the Examiner may grant the interview if the examiner is

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convinced that disposal or clarification for appeal may be accomplished with only nominal further consideration. Interviews merely to restate arguments of record or to discuss new limitations will be denied. See MPEP 714.13 and 713.09.

### ***Conclusion***

16. Please provide reference numerals (either in parentheses next to the claimed limitation or in a table format with one column listing the claimed limitation and another column listing corresponding reference numerals in the remark section of the response to the Office Action) to all the claimed limitations as well as support in the disclosure for better clarity (optional).

Applicants are duly reminded that a full and proper response to this Office Action that includes any amendment to the claims and specification of the application as originally filed requires that the applicant point out the support for any amendment made to the disclosure, including the claims. See 37 CFR 1.111 and MPEP 2163.06.

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick K. Chang whose telephone number is (571) 272-4564. The examiner can normally be reached on 5:30 AM to 1:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rick K. Chang/  
Primary Examiner, A.U. 3726

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November 14, 2008